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MYCOLOGIA

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ILLUSTRATIONS OF FUNGI—XII

WILLIAM A. MURRILL

The figures on the accompanying plate¹ were all drawn from specimens collected in and near Bronx Park, New York City, and represent a few of the many attractive and highly-colored species included in the genus *Russula*. This very difficult genus is now being monographed for NORTH AMERICAN FLORA by Dr. Gertrude S. Burlingham, who has kindly determined for me the species here figured.

Most of the members of this genus are edible, and some of them are particularly good, but they are usually scattered, are fragile and perishable, become infested early with a variety of insects, are eaten by squirrels and other animals, and resemble one another so closely that it is advisable to go to the trouble of tasting nearly every specimen before selecting it for the table. There are no violently poisonous species known in this genus, and if specimens have a mild taste and an agreeable odor they are probably harmless, but it must always be remembered that it is necessary to test each new species thoroughly before using it in any quantity for food. The botanical characters of the genus are not difficult to learn, and it may be distinguished from the nearest related genus, *Lactaria*, by the absence of a milky juice in the tissues of the sporophore.

[MYCOLOGIA for September, 1912 (4: 231-287), was issued August 28, 1912]

¹ This plate should be numbered 76 instead of 74.



POLYSTICTUS VERSICOLOR ON CATALPA

Russula sericeonitens Kauffman

SILKY-SHINING RUSSULA

Plate 76. Figure 1. $\times 1$

Pileus regular, convex to plane or depressed, gregarious, reaching 9 cm. broad; surface smooth, rather viscid, dark-purple, blackish-purple at the center, not striate on the margin; context rather thick, white, mild to the taste, odor not characteristic; lamellae white, becoming slightly yellowish with age but not ochraceous; spores subglobose, roughly tuberculate, hyaline, 8–10 μ ; stipe cylindric, equal, smooth, dry, milk-white, 5–7 cm. long, scarcely 2 cm. thick.

Collected on the ground in oak woods near Bronx Park, New York City, September 10, 1910, by W. A. Murrill. Described in 1909 from northern Michigan, where it is not uncommon in mixed woods during July and August, usually growing solitary. The spores of the typical plant are recorded as 6–7.5 μ .

Russula Mariae Peck

MARY'S RUSSULA

Plate 76. Figures 2 and 8. $\times 1$

Pileus fleshy, convex and subumbilicate to depressed, reaching 7 cm. broad; surface dry, rose-red or purple with darker disk, having a bloom like a peach, margin slightly striate at times, especially in old plants; context thin, of good flavor, white, pinkish under the cuticle, odor not characteristic; lamellae white or stramineous, broad, subcrowded, interveined; spores subglobose, minutely conic-tuberculate, yellow, 7 μ ; stipe equal, solid, rosy, sometimes partly white, glabrous, about 1.3–1.5 cm. thick.

Common under oaks throughout the eastern United States. Figure 8 represents the more usual form; figure 2 shows a variety having lilac or violet tints with a beautiful white bloom or pruinosity. This is one of our prettiest species, as well as one of the best for the table.

Russula emetica Fries

EMETIC RUSSULA

Plate 76. Figure 3. $\times 1$

Pileus regular, firm to fragile, convex to plane or depressed, 5–8 cm. broad; surface viscid when young, polished, red, often

fading to pallid or yellowish, cuticle separating very readily; context white, reddish under the cuticle, very acrid to the taste; lamellae white, then dull-yellowish, free, subdistant, broad, equal; spores globose, echinulate, hyaline, 8–10 μ ; stipe rosy or whitish, glabrous, spongy-solid, 3–7 cm. long, 1–1.5 cm. thick.

Common in woods throughout Europe and the eastern United States, often growing where logs have decayed. Distinguished by its red color, viscid surface, readily separating cuticle, and very acrid taste. In addition to its acrid quality, it is definitely poisonous, containing small quantities of choline, pilzatrophine, and probably muscarine. When taken in any quantity, it acts as a prompt emetic. It is mainly because of this species that most specimens of *Russula* should be tasted before selecting them for food.

***Russula sulcatipes* sp. nov.**

FURROWED-STEMMED RUSSULA

Plate 76. Figure 4. $\times 1$

Pileus convex to plane or depressed, reaching 7 cm. broad; surface dry, pruinose, smooth, pale avellaneous-isabelline, slightly striate on the margin, becoming more conspicuously so on drying; context very thin, white, very firm, mild and nutty to the taste, odor not characteristic; lamellae white, becoming cream-colored or somewhat darker on drying, adnate, plane, subdistant; spores globose, roughly tuberculate, hyaline under a microscope, 7–9 μ ; stipe equal or slightly enlarged below, with rather conspicuous longitudinal raised lines, milk-white, glabrous, solid, about 5 cm. long and 1.3 cm. thick.

Type collected on the ground in oak woods near Bronx Park, New York City, September 10, 1910, by W. A. Murrill.

***Russula obscura* Romell**

OBSCURE RUSSULA

Plate 76. Figure 5. $\times 1$

Pileus convex to expanded or depressed, reaching 12 cm. broad; surface slightly viscid, vinous at the center, much paler vinous toward the margin, slightly striate on the immediate margin, usually decorated with bits of earth and leaves that are carried upward as the sporophore emerges from the soil; context white, at first mild, at length somewhat peppery; lamellae white or

straw-yellow when viewed perpendicularly, becoming somewhat cinereous or discolored on drying; spores subglobose, roughly tuberculate, hyaline, 8μ ; stipe white with a cinereous tint, smooth, ochraceous, solid, $6 \times 2-2.5$ cm.

Collected on a rather dry bank at the edge of oak woods near Bronx Park, New York City, May 22, 1910, by W. A. Merrill. Described from Sweden.

***Russula uncialis* Peck**

INCH RUSSULA

Plate 76. Figure 6. $\times 1$

Pileus thin, very fragile, convex to plane or depressed, 2.5-4.5 cm. broad; surface dry or slightly viscid, glabrous or minutely granulose, at times obscurely striate on the margin, red or rosy with incarnate or testaceous hues; context thin, white, of mild flavor, without odor; lamellae white, becoming stramineous or cremeous, interveined, subcrowded, narrow behind; spores globose, rough, hyaline, $7-8\mu$; stipe equal or enlarging below, glabrous, spongy or stuffed, milk-white, rarely reddish, 2.5-4 cm. long, 4-10 mm. thick.

Collected under an oak on the grounds of the New York Botanical Garden. Found sparingly in certain localities in the eastern United States.

***Russula foetens* Pers.**

FETID RUSSULA

Plate 76. Figure 7. $\times 1$

Pileus firm, rather thin, globose to plane or slightly depressed, 5-10 cm. broad; surface very viscid, slimy, conspicuously striate-tuberculate, ochraceous-melleous, testaceous-fulvous in the center with small bay or blackish areas; context whitish, tardily acrid and mucilaginous to the taste, with odor of prussic acid; lamellae mostly equal, adnate or adnexed, subcrowded, arcuate, white, staining brownish when injured, usually decorated with small drops of water when the air is damp; spores globose, strongly echinulate, hyaline, 10μ ; stipe cylindric, equal or somewhat ventricose, glabrous or subglabrous, white, staining brownish when injured, hollow, 5-8 cm. long, 1-2 cm. thick.

This conspicuous species is common under oaks in groves or

woodlands throughout most of Europe and the United States, sometimes occurring in great quantity in one spot. Its odor is similar to that of peach kernels, and in some specimens it is strong and unpleasant, although at times it may be scarcely noticeable. This unpleasant odor and the very slimy character of the surface render the plant unattractive and one would hardly collect it for food. It is known to be definitely poisonous to a certain extent and should always be avoided by mycophagists.

***Russula rubriochracea* sp. nov.**

RED AND YELLOW RUSSULA

Plate 76. Figure 9. $\times 1$

Pileus convex to plane or slightly depressed, reaching 6 cm. broad; surface red or purple with a bloom, darker in the center, not at all striate, dry, smooth, margin entire, concolorous; context white, thin, taste at first nutty, becoming distinctly but not violently acrid, odor not characteristic; lamellae exactly ochraceous even in a very young stage, adnexed, plane, subdistant; spores subglobose, roughly tuberculate, hyaline under a microscope, ochraceous in mass, 8-11 μ ; stipe tapering below, smooth, dry, glabrous, pale rose-colored or lilac, about 4.5 cm. long and 1.3 cm. thick.

Type collected on the ground in oak woods near Bronx Park, New York City, September 10, 1910, by W. A. Murrill. Related to *R. Mariae*, but estriate, acrid, and with yellow lamellae.

NEW YORK BOTANICAL GARDEN.